

REMARKS

The Office Action dated December 14, 2005, has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1, 10, 19 and 28-30 have been amended. No new matter has been added, and no new issues are raised which require further consideration and/or search. Claims 1-19 and 21-30 are submitted for consideration.

Claims 1-3, 10-13, 19, 21, and 27-30 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,631,122 B1 (Arunachalam) in view of U.S. Patent No. 6,657,962 B1 (Barri). According to the Office Action, the arguments filed in the previous response have been considered but are moot in view of the new grounds of rejection. Specifically, the Office Action indicates that Arunachalam teaches all of the elements of claims 1-3, 10-3, 19, 21 and 27-30 except for disclosing that the adjusting includes resource usage calculation. Thus, the Office Action combines the teachings of Arunachalam with Barri to yield all of the elements of claims 1-3, 10-13, 19, 21 and 27-30. The rejection is traversed as being based on references that neither teach nor suggest the novel combination of features clearly recited in independent claims 1, 10, 19, and 28-30.

Claim 1, upon which claims 2-9 depend, recites a method of operating a differentiated service network having a plurality of routers, the method including determining an operating condition at a first router. The method also includes

propagating an indication of the operating condition at the first router to a second router and adjusting at least one parameter of constraint of incoming traffic flow based on the indication. The adjusting includes renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint and the adjusting includes performing parameter mapping and resource usage calculation.

Claim 10, upon which claims 11-18 depend, recite a method of operating a differentiated service network having a plurality of routers, the method including receiving, at a second router, an indication of an operating condition at a first router and adjusting at least one parameter of a constraint of incoming traffic flow based on the indication of the operating condition. The adjusting includes renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint and the adjusting includes performing parameter mapping and resource usage calculation.

Claim 19, upon which claims 21-27 depend, recites a differentiated service network including a first router and a second router coupled to the first router, the first router being associated with a first entity to determine an operating condition at the first router. The first entity associated with the first router propagates an indication of the operating condition at the first router device to a second router. The network also includes means for adjusting at least one parameter of constraint of incoming traffic flow based on the indication. The adjusting means includes means for renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one

parameter of constraint and the adjusting means includes means for performing parameter mapping and resource usage calculation.

Claim 28 recites an apparatus for operating a differentiated service network having a plurality of routers, the apparatus including determining means for determining an operating condition at a first router and propagating means for propagating an indication of the operating condition at the first router to a second router. The apparatus also includes adjusting means for adjusting at least one parameter of constraint of incoming traffic flow based on the indication. The adjusting means includes means for renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint and the adjusting includes performing parameter mapping and resource usage calculation.

Claim 29 recites a second router including receiving means for receiving, at the second router, an indication of an operating condition at a first router; and adjusting means for adjusting at least one parameter of a constraint of incoming traffic flow based on the indication of the operating condition. The adjusting means includes means for renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint and the adjusting includes performing parameter mapping and resource usage calculation.

Claim 30 recites a first router, including coupling means for coupling the first router to a second router, the first router being associated with a first entity to determine an operating condition at the first router, wherein the first entity associated with the first

router propagates an indication of the operating condition at the first router device to the second router. The second router includes means adjusting at least one parameter of constraint of incoming traffic flow based on the indication. The adjusting means includes means for renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint and adjusting means includes means for performing parameter mapping and resource usage calculation.

As will be discussed below, the cited prior art references fail to disclose or suggest the elements of any of the presently pending claims.

Arunachalam discloses a wireless network with an IP core network that is connected to collector networks which includes various types of services and are connected to end terminals. Col. 3, lines 51-67 and Figure 1. Arunachalam also discloses an IP QoS architecture with multiple QoS managers connected to respective IP services in distinct access networks. The architecture also includes a QoS agent which is a slave device to the QoS manager. The agent configures and enforces policies within the network devices flow handling mechanism. The primary function of the agent is enforcing flow classification, marking, mapping, and treatment policies. Col. 4, lines 1-42. The QoS agent is also advantageous in wireless systems in guiding a Radio Resource Manager (RRM) in allocating radio channels (each with different levels of QoS) and software blocks for link layer Automatic Request for Retransmission (ARQ) and power control algorithms. A wireless agent in the system is built on the IP QoS agent structure including radio link dependent functions. Col. 4, line 50-Col. 5, line 52 and Figures 2-5.

Arunachalam also discloses that QoS requirements should be met over an entire network between a source and destination. QoS is specified in an IP packet by marking a certain byte. An IP packet from the base station to a mobile device with a specified QoS is routed to a suitable MAC resource and physical channel resource so that its QoS requirements are met by using a unique identifier for each flow. QoS parameters may be provisioned on a per-flow basis as the flow traverses the network or flows may be aggregated into services classes with associated behavior for each class. QoS processing functions are divided into QoS mapping and implementation functions to change the underlying QoS provisioning mechanism/resources without changing the service call definition. Col. 6, lines 1-65. When a packet arrives from a wired network to a wireless network, a QoS mapping function extracts the type of service byte that indicates the QoS desired by the IP packet and send the byte to the wireless QoS agent. The wireless QoS agent examines the byte, maps it to the class of service, assigns a tag to the flow and returns the tag to the mapping function and RRM for later IP packets of the same flow. The RRM decides on the MAC layer and physical layer resources to be allocated to a wireless service class. A scheduler schedules all incoming frames from the MAC layer based on weights assigned by the wireless QoS agent. The scheduling algorithm may be a simple priority queuing or a weighted fair packet queuing algorithm. If the weighted fair packet queuing is used, the wireless QoS agent adjusts the weights based on the knowledge of the precedence and bandwidth allocation for the traffic classes scheduled. Col. 7, line 54-Col. 10, line 35 and Figure 8.

Barri discloses a method and system using congestion indicators within an ingress system, egress system and a switch fabric in conjunction with a coarse adjustment system and fine adjustment system within the ingress device and the egress device to intelligently manage the system. See at least the Abstract.

Applicant submits that the combination of Arunachalam and Barri fail to teach or suggest the combination of elements recited in the presently pending claims. Claims 1, 10, 19, and 28-30 recite, in part, adjusting at least one parameter of constraint of incoming traffic flow based on said indication, wherein said adjusting comprises renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint. Arunachalam and Barri fail to disclose or suggest adjusting at least one parameter of constraint of incoming traffic flow based on said indication, wherein said adjusting comprises renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint. Beginning on page 21, the fourth line; the present application teaches that during the adjustment, the firewall may renegotiate the constraint or make a recommendation to the network operator to change the profile based on the constraint. The associated description of Arunachalam and Barri, on the other hand, fails to disclose or suggest performing any negotiations based on the constraint or making any recommendation based on the constraint. Thus, Applicant respectfully asserts that the rejection under 35 U.S.C. §103(a) should be withdrawn because neither Arunachalam and

Barri, whether taken singly or combined, teaches or suggests each feature of claims 1, 10, 19, and 28-30 and hence, dependent claims 2-9, 11-18, and 21-27 thereon.

Claims 4-7, 9, 14-18 and 22-26 were rejected under 35 U.S.C. 103(a) as being unpatentable over Arunachalam in view of Barri and U.S. Patent No. 6,,542,466 B1 (Pashtan). According to the Office Action, Arunachalam and Barri teach all of the elements of claims 4-7, 9, 14-18 and 22-26 except for disclosing that the operating condition comprises a status of stability. Thus, the Office Action combines the teachings of Pashtan with Arunachalam and Barri to yield all of the elements of claims 4-7, 9, 14-18 and 22-26. The rejection is traversed as being based on references that neither teach nor suggest the novel combination of features clearly recited in independent claims 1, 10, and 19.

Pashtan discloses a wireless QoS agent for an IP network which is coupled to the network by coupling means. The coupling means includes communications means for transfer of information between the agent and a QoS manager.

All of claims 4-7, 9, 14-18 and 22-26 depend on independent claims 1, 10 and 19 and thus incorporate all of the elements of those claims. Pashtan does not cure the deficiencies of Arunachalam and Barri, as outlined above. Specifically, Pashtan does not teach or suggest adjusting at least one parameter of constraint of incoming traffic flow based on said indication, wherein said adjusting comprises renegotiating the at least one parameter of constraint or providing a recommendation based on the at least one parameter of constraint, as recited in claims 1, 10 and 19. Thus, respectfully asserts that

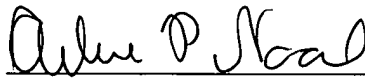
the rejection under 35 U.S.C. §103(a) should be withdrawn because neither Arunachalam, Pashtan and Barri, whether taken singly or combined, teaches or suggests each feature of claims 1, 10, and 19 and hence, dependent claims 4-7, 9, 14-18 and 22-26 thereon.

As noted previously, claims 1-19 and 21-30 recite subject matter which is neither disclosed nor suggested in the prior art references cited in the Office Action. It is therefore respectfully requested that all of claims 1-19 and 21-30 be allowed and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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